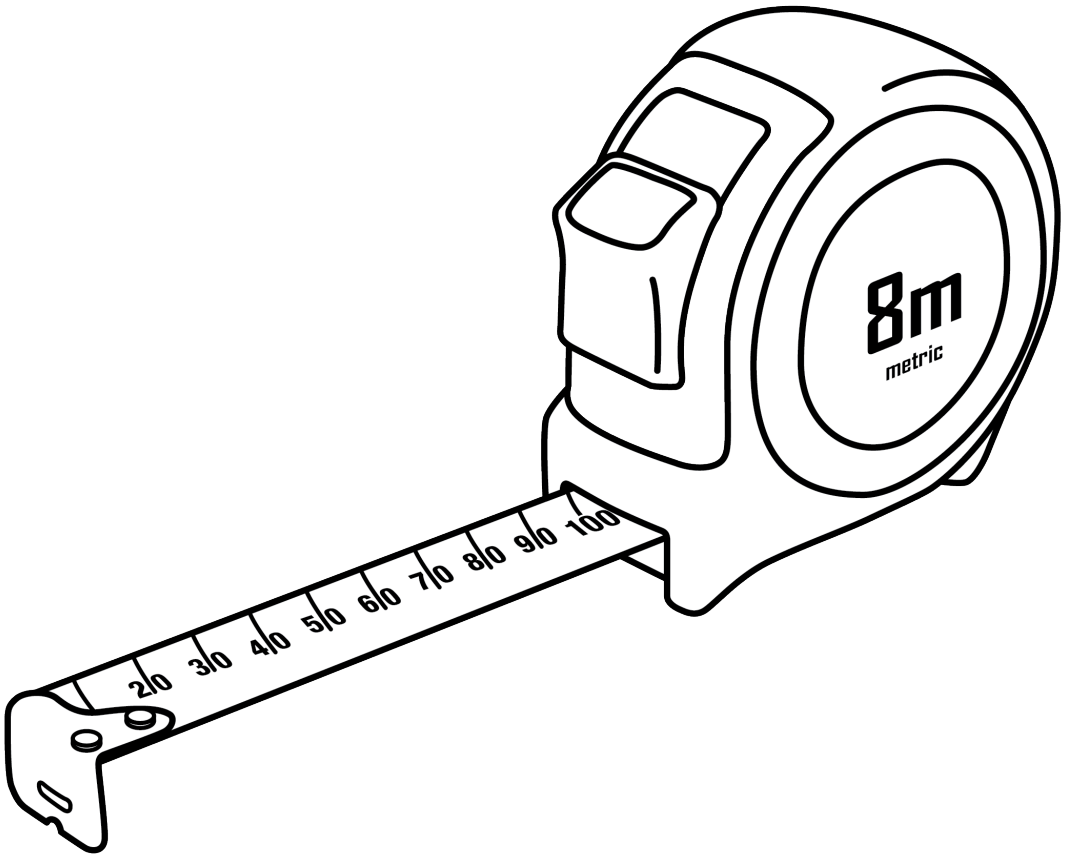
BCATS
BUILDING, CONSTRUCTION AND ALLIED TRADES SKILLS

Basic measurements and calculations

Level 1

Assessment resource



3 credits

Skill Standard 40547 (v1)

Apply basic measurement and calculations to a BCATS project or related tasks

Learner name: _____

BCATS project: _____

BCITO
He Hunga Hanga Mātou
building people

Assessment: Basic measurements and calculations

Learner instructions

This assessment is about using basic measurements and calculations to solve problems for a BCATS project.

You need to show you can:

- use the project instructions to make sure project measurements are correct and to scale
- use calculations correctly to create a cutting list
- confirm with your teacher that your cutting list is accurate before you start cutting.

Note: you can use a calculator/apps/computer to help with your measurements and calculations.

Over the page, you will see what you need to do for this assessment.



Your teacher will observe you carrying out measurements and calculations for your project. They will provide comments in this assessment resource as evidence to support their observations.

You will need to provide the following evidence to support this. Submit it using myBCITO or the process at your school/organisation.



A completed *Cutting list* worksheet (pg. 3 of this assessment resource).



Your workings for measurements and calculations you completed for your project, including any adjustments you made as you worked through the project tasks.

It is a good idea to use the assessment checklist in this resource to keep track of the evidence you have collected.

The grade you are awarded will be based on your ability to use measurements and calculations correctly for your project.

Worksheet: Cutting list

For this assessment activity, you need to show you have a solid understanding of how to work out the amount of timber you need for your project. You should use information in the project instructions for this activity.

In the table below:



- list timber types and amounts that you will need for your project components (e.g. legs, supports).

Example answers have been given.

Project component	Material	Quantity needed	Dimensions (mm)		
			Length	Width	Thickness
Example: Seat slats	Kwila 90x19 decking	4	610		
Side panel	16 mm Redline ply	2	1300	400	

Measure and calculate

For this assessment activity, you need to show you can complete measurements and calculations to move your project forward, without being prompted.

Here are some examples of methods you might use:

- Measuring lengths and widths of timber before cutting
- Calculating angles for joining project components.



Your teacher will observe you using measurements and calculations for your project.

Below is a guide to the other evidence you need to collect during your practical work. You should work with your teacher to make sure you've provided everything needed:



Your workings for measurements and calculations you completed for your project, including any adjustments you made as you worked through the project tasks.

Assessment checklist: Basic measurements and calculations

To be completed by the learner and the teacher.

Assessment activity	Evidence needed	Date all evidence collected (Learner to complete)	Teacher sign-off
Measurements and calculations	Your workings for measurements and calculations you completed for your project, including any adjustments.		
Cutting list	A completed *Cutting list* worksheet.		
Note: A copy of the project instructions must also be included in your overall portfolio of evidence.			

Teacher observation: Basic measurements and calculations

Learner name: Project:

Teacher instructions

Below are criteria for the available grades.

Not Achieved	Achieved	Merit	Excellence
Basic measurements and calculations are not applied appropriately.	Apply basic measurement and calculations to a BCATS project or related tasks.	Apply basic measurement and calculations effectively to a BCATS project or related tasks.	Apply basic measurement and calculations skilfully to a BCATS project or related tasks.



Provide comments on the learner's ability to meet the following assessment criteria, considering everything you observed throughout the project.

Measurements from the project instructions are confirmed as correct and to scale.	
Mathematical methods are used, including any adjustments as needed to move the project forward.	
Appropriate records of all measurements and calculations are kept.	

Grade awarded: Basic measurements and calculations

Teacher instructions

After considering all the evidence collected, enter the grade you will award for Skill Standard 40547, with comments that explain your decision.

Final grade		**Date**	
Justification for final grade (Provide overall comments, considering all evidence collected)			

Teacher and learner sign-off

		Date
Learner signature (Grade received and accepted)		
Teacher sign-off	Name: _____ Signature: _____	